A kit for sequencing may comprise a number of container means. A first container means may, for example, comprise one or more RNases of the invention. A second container means may comprise a polymerase or combination of polymerases. A third container may comprise one or a number of types of nucleotides needed to synthesize a DNA molecule complementary to a DNA template. A fourth container means may comprise one or more or a number of different types of terminators (such as dideoxynucleoside triphosphates). A fifth container means may comprise pyrophosphatase. In addition to the above container means, additional container means may be included in the kit which comprise one or a number of primers and/or a suitable sequencing buffer.

Substitute the first paragraph after "EXAMPLE 1" with the following paragraph:

Samples from a cDNA library which could not be amplified using a reaction buffer without RNase were grown in I ml of LB (100 ug ampicillin/ml) overnight at 30°C. Also, 5 ul from each of the fresh cultures were dotted on an ampicillin plate and grown overnight at 30°C.

In the Claims:

Please cancel claims 1-7 and 14-37, drawn to non-elected inventions, without prejudice or disclaimer.

Please substitute the following claims 8-10 and 12 for the pending claims 8-10 and 12:

8. (once amended) A method for synthesizing a nucleic acid molecule from a crude preparation containing DNA, said method comprising:

a) mixing the crude preparation containing DNA wherein the DNA functions as a nucleic acid template, with one or more DNA polymerases, and one or more peptides or polypeptides having ribonuclease activity; and

cont B1

b) incubating said mixture under conditions sufficient to synthesize a nucleic acid molecule complementary to all or a portion of said template.

9. (once amended) The method according to claim 8, wherein said peptide or polypeptide having ribonuclease activity is selected from the group consisting of: RNase A, RNase T1, RNase H, RNase S, RNase B, RNase C, RNase T2 and enzymatically active fragments, variants, derivatives or mutants thereof.

a15

10. (once amended) The method according to claim 8, wherein said mixture further comprises one or more components selected from the group consisting of: a) at least one nucleotide; b) at least one suitable buffer for nucleic acid synthesis; and c) at least one primer.

12. (once amended) The method according to claim 11, wherein said thermostable DNA polymerase is selected from the group consisting of: *Taq* DNA polymerase, *Tne* DNA polymerase, *Tma* DNA polymerase, *Tth* DNA polymerase, *Tli* DNA polymerase, *Pfu* DNA polymerase, *Pyrococcus* species GB-D DNA polymerase, *Pwo* DNA polymerase, *Bst* DNA polymerase, *Bca* DNA polymerase, *Tfl* DNA polymerase and enzymatically active fragments, variants, derivatives or mutants thereof.

a16

Please add the following claims:

a17

38. (new) A method for synthesizing a nucleic acid molecule, said method comprising:

a) mixing a nucleic acid template, with one or more DNA polymerases, and one or more peptides or polypeptides having ribonuclease activity, wherein the peptide or polypeptide is not RNase H; and

b) incubating said mixture under conditions sufficient to synthesize a nucleic acid molecule complementary to all or a portion of said template.

39. (new) The method according to claim 38, wherein said peptide or polypeptide having ribonuclease activity is selected from the group consisting of: RNase A, RNase T1, RNase S, RNase B, RNase C, RNase T2 and enzymatically active fragments, variants, derivatives or mutants thereof.

40. (new) The method according to claim 38, wherein said mixture further comprises one or more components selected from the group consisting of: a) at least one nucleotide; b) at least one suitable buffer for nucleic acid synthesis; and c) at least one primer.

a17 cont

41. (new) The method according to claim 38, wherein said DNA polymerase is thermostable.

42. (new) The method according to claim 41, wherein said thermostable DNA polymerase is selected from the group consisting of: *Taq* DNA polymerase, *Tne* DNA polymerase, *Tma* DNA polymerase, *Tth* DNA polymerase, *Tli* DNA polymerase, *Pfu* DNA polymerase, *Pyrococcus* species GB-D DNA polymerase, *Pwo* DNA polymerase, *Bst* DNA

polymerase, *Bca* DNA polymerase, *Tfl* DNA polymerase and enzymatically active fragments, variants, derivatives or mutants thereof.

43. (new) The method according to claim 40, wherein one or more of said nucleotides are detectably labeled.

44. (new) A method for synthesizing a nucleic acid molecule, said method comprising:

a) mixing a nucleic acid template which is not cDNA, with one or more DNA polymerases, and one or more peptides or polypeptides having ribonuclease activity; and

b) incubating said mixture under conditions sufficient to synthesize a nucleic acid molecule complementary to all or a portion of said template.

45. (new) The method according to claim 44, wherein said peptide or polypeptide having ribonuclease activity is selected from the group consisting of: RNase A, RNase T1, RNase H, RNase S, RNase B, RNase C, RNase T2 and enzymatically active fragments, variants, derivatives or mutants thereof.

a17 cont

46. (new) The method according to claim 44, wherein said mixture further comprises one or more components selected from the group consisting of: a) at least one nucleotide; b) at least one suitable buffer for nucleic acid synthesis; and c) at least one primer.

47. (new) The method according to claim 44, wherein said DNA polymerase is thermostable.

48. (new) The method according to claim 47, wherein said thermostable DNA polymerase is selected from the group consisting of: *Taq* DNA polymerase, *Tne* DNA polymerase, *Tma* DNA polymerase, *Tth* DNA polymerase, *Tli* DNA polymerase, *Pfu* DNA polymerase, *Pyrococcus* species GB-D DNA polymerase, *Pwo* DNA polymerase, *Bst* DNA polymerase, *Bca* DNA polymerase, *Tfl* DNA polymerase and enzymatically active fragments, variants, derivatives or mutants thereof.

49. (new) The method according to claim 46, wherein one or more of said nucleotides are detectably labeled.

50. (new) A method for synthesizing a nucleic acid molecule, said method comprising:

a) mixing a nucleic acid template with one or more DNA polymerases and one or more peptides or polypeptides having ribonuclease activity, wherein nucleic acid synthesis has not occurred prior to said mixing; and

b) incubating said mixture under conditions sufficient to synthesize a nucleic acid molecule complementary to all or a portion of said template.

51. (new) The method according to claim 50, wherein said peptide or polypeptide having ribonuclease activity is selected from the group consisting of: RNase A, RNase T1,

RNase H, RNase S, RNase B, RNase C, RNase T2 and enzymatically active fragments, variants, derivatives or mutants thereof.

52. (new) The method according to claim 50, wherein said mixture further comprises one or more components selected from the group consisting of: a) at least one nucleotide; b) at least one suitable buffer for nucleic acid synthesis; and c) at least one primer.

53. (new) The method according to claim 50, wherein said DNA polymerase is thermostable.

54. (new) The method according to claim 53, wherein said thermostable DNA polymerase is selected from the group consisting of: *Taq* DNA polymerase, *Tne* DNA polymerase, *Tma* DNA polymerase, *Tth* DNA polymerase, *Tli* DNA polymerase, *Pfu* DNA polymerase, *Pyrococcus* species GB-D DNA polymerase, *Pwo* DNA polymerase, *Bst* DNA polymerase, *Bca* DNA polymerase, *Tfl* DNA polymerase and enzymatically active fragments, variants, derivatives or mutants thereof.

55. (new) The method according to claim 52, wherein one or more of said nucleotides are detectably labeled.